

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 April 2005 (14.04.2005)

PCT

(10) International Publication Number
WO 2005/032599 A1

(51) International Patent Classification⁷: **A61K 51/00**

(21) International Application Number:
PCT/US2004/032289

(22) International Filing Date:
30 September 2004 (30.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/507,427 30 September 2003 (30.09.2003) US

(71) Applicant (for all designated States except US): **SEMAFORE PHARMACEUTICALS INC.** [US/US];
8496 Georgetown Road, Indianapolis, IN 46268 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GARLICH, Joseph**,

R. [US/US]; 328 West Columbine Lane, Westfield, IN 46268 (US). **SUHR, Robert, G.** [US/US]; 1522 Bruner Drive, Greenfield, IN 46140 (US). **PATTERSON, Mary** [US/US]; 5029 Surrey lane, Carmel, IN 46033 (US).

(74) Agents: **MYERS, James, B., Jr.** et al.; Woodard, Emhardt, Moriarty, McNett & Henry LLP, Suite 3700, Bank One Center/ Tower, 111 Monument Circle, Indianapolis, IN 46204 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: CHELATE BASED SCAFFOLDS IN TUMOR TARGETING

(57) **Abstract:** This invention relates to novel complexes that can be used to target tumor cells. The complexes include a ligand that can bind metal ions including radioactive lanthanide ions. The complexes can mimic $\alpha_1\beta_3$ integrin receptor antagonists and deliver the complexed radioactive metals to the tumor cells.

WO 2005/032599 A1



(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*